

POTENTIAL DEEPWATER HORIZON OIL SPILL RESTORATION PROJECTS:

PROVIDING INFORMATION TO ASSIST WITH PROJECT ASSESSMENT

To help you propose projects to the State of Florida's Department of Environmental Protection (DEP), we developed this project submission form. You are not required to complete this form to submit a project. However, completion of the form will help DEP gather the information required to completely and accurately evaluate a project against the selection and evaluation criteria. Where appropriate in the form, please provide references to any additional supporting information.

Project Name: *(Include project number from DEP's existing list of submitted projects, if applicable.)*

Walton County Offshore and Inshore Artificial Reef Construction (DEP W-17)

The original proposal was for 20 artificial reefs. This proposal is to renourish three existing near shore artificial reef sites and create three new snorkeling reef sites and four new fishing/diving reef sites in the Gulf of Mexico, for a total of approximately 46 patch reefs.

Location for Project Implementation: *(For example, city and county, GIS coordinates if known.)*

All reefs are located within the estuarine and near shore marine waters adjacent to Walton County. See [Tab 2](#) for location maps and a patch reef configuration example.

Existing Reefs:

Genesis One -86 1.605, 30 15.052

Eastern Lake -86 6.497, 30 17.447

Miramar -86 22.9, 30 19.7

New Reefs:

Three snorkeling reef areas, each with three to five patch reefs (for a total of 15 reefs) within 1,000 feet from shore.

Four 40-acre fishing/diving reefs areas, each with five patch reefs (for a total of 20 reefs) within 9 miles from shore.

Snorkel Reef Site #1-Miramar -86 23.25, 30 22.51

Snorkel Reef Site #2-Blue Mountain -86 12.09, 30 20.08

Snorkel Reef Site #3 - Inlet Beach -86 0.28, 30 16.17

Fishing Site #1 -86 19.28, 30 14.33

Fishing Site #2 -86 13.69, 30 17.18

Fishing Site #3 -86 11.93, 30 12.53

Fishing Site #4 -86 5.2, 30 13.33

Brief Project Narrative: *(Describe what the project will do.)*

This project will provide near shore artificial reefs that will be accessible from shore and designed for use by snorkelers, kayakers, fishermen and divers. This proposal includes the renourishment of three existing artificial reef sites and siting, design, permitting and construction of seven new near shore artificial reef sites for a total of approximately 46 reef clusters or patch reefs within the permitted reef areas.

This project will provide habitat for estuarine and marine species impacted or possibly impacted by the Deepwater Horizon Oil Spill. New artificial reefs will accelerate ecological and economic recovery from the oil spill by restoring damaged fisheries, providing new habitat, stimulating increased tourism and mitigating for lost fishing and diving opportunities. See [Tab 1](#) for project overview.

Estimated Project Costs: *(Describe the costs of the project, including any assumptions for contingency and ongoing operations and maintenance. Identify other available funding sources such as matching funds, in kind contributions or state or federal dollars. If possible, attach a schedule of anticipated costs, by year, over the anticipated project life.)*

The cost breakdown for this project is separated into two categories: 1) Existing Artificial Reefs; and 2) New Artificial Reefs. This project is in the early stages of development and several reef designs and materials will be explored in the planning stage. For the purposes of this proposal, we anticipate using approximately 1,280 prefabricated concrete modules at an average cost of \$1,500 per module, giving us the option of adding or subtracting modules for different reefs at different sites as plans are finalized and funds are available. See [Tab 3](#) for estimated cost breakdown.

1. Existing Artificial Reefs: \$551,475

2. New Artificial Reefs: \$1,906,400

Total Project Costs: \$2,457,875

Anticipated Project Outcome with Respect to Screening Criteria

S1. Technically and administratively feasible: *(Briefly describe the critical technologies involved and any relevant past experience with similar projects.)*

Walton County has constructed four near shore artificial reefs in the past ten years. The proposed renourished and new reefs will consist of concrete, limestone, and/or steel materials. Typical reef materials include prefabricated concrete modules (tetrahedrons). The County is considering an interlocal agreement with neighboring counties that have extensive experience constructing and deploying artificial reefs in the regional marine environment. Escambia County has constructed 116 artificial reefs over the past decade, comprised of more than 200 deployments, and Okaloosa County has managed over 1,500 artificial reef construction projects and deployments. This project will also contract local consultants experienced with streamlining reef area permitting. See [Tab 6](#) for more information on reef design and materials and [Tab 5](#) - Partnerships.

S2. Provides environmental benefits: *(Briefly describe the nature, magnitude, and timing of any environmental benefits attributable to the project and any potential environmental costs associated with implementing or maintaining the project, e.g., loss of a habitat or conversion of habitat from one type to another during implementation.)*

The local near shore environment in the Gulf of Mexico near Walton County is relatively featureless. It has been well documented that the addition of submerged structures has an immediate positive impact on the marine environment by providing additional habitat for marine life and opening new areas of seafloor as reef habitat. The proper construction of artificial reefs provides habitat to a wide variety of marine life, vertebrate and invertebrate, including target species such as grouper, snapper, amberjack and various pelagic species with a very low maintenance requirement. In addition, the presence of smaller marine species that find refuge on and around artificial reefs will provide forage for larger species. By focusing on near shore waters that are relatively shallow (35-60 feet), bycatch/discard mortality will be minimized to negligible levels. Thus, fishery catch/conservation objectives will be maximized. Reducing the distance traveled by fishers and divers will provide environmental and economic benefits via reducing fuel consumption and will also enhance maritime safety by reducing offshore travel distances from port.

S3. Does not conflict with any ongoing or planned response or remediation work: *(Briefly describe ongoing response activities in the project implementation area, if any, and why the project does or does not interfere with that work.)*

There is no response or remediation work in the proposed reef construction area.

S4. Complies with applicable and relevant federal, state, local, and tribal laws and regulations: *(No information is needed for this screening criteria.)*

The project is regulated by federal and state rules and regulations. Walton County will work closely with the US Army Corps of Engineers and the Florida Department of Environmental Protection in the permitting process of the applicable reef deployment area.

Anticipated Project Outcome with Respect to Evaluation Criteria

E1. Will restore, rehabilitate, or replace a natural resource or service¹ believed/demonstrated to have been injured as a result of the Deepwater Horizon oil spill or associated response activities: *(Briefly describe the nature of any relationship between the new/improved resources or services and those adversely impacted by the oil spill.)*

Walton County experienced significant loss of use of our near shore Gulf water resources as a result of the Deepwater Horizon oil spill which were restricted by state and federal agencies for recreational fishing, diving, boating and other water-related activities. All of Walton County beaches and Gulf waters were impacted by oil in the form of tar balls and/or mats. This project will provide additional marine resources available for Walton County citizens and visitors who experienced loss of use during the 2010 fishing/boating/recreational season. The newly created habitat will result in an overall increase in marine biomass and serve as a safe haven for migratory juvenile species from inshore spawning areas to permanent offshore habitats.

¹ In this form, "Services" (or "natural resource services") refers to the functions performed by a natural resource for the benefit of another natural resource and/or the public. Services can be "ecological services" – physical, chemical or biological functions that one natural resource provides for another (such as provision of food) – or "human services" – the use of natural resources used by humans that provide value to the public (such as hunting and fishing).

E2. Is located in, or nearby, resources or services injured by the deepwater horizon spill: *(Briefly describe where the project would be implemented with respect to past/ongoing remediation work.)*

Walton County experienced impacts to its Gulf waters and coastal shoreline as a result of the Deepwater Horizon oil spill in the form of tar balls and/or mats. The proposed reef system is planned at several locations near shore in the Gulf of Mexico to be accessible by kayakers, swimmers, fishermen, boaters and residents of Walton County.

E3. Is ready for implementation, e.g., design, permitting, and necessary impacts assessments have been completed: *(Briefly describe where in the permitting process the project stands along with an estimated date of when the project can be implemented if it is not currently ready.)*

New permits for this project have not been acquired or initiated. Existing permitted sites will be relatively simple to renew, and will take 45-90 days. Local contractors and several neighboring counties have experience in this type of effort and can provide assistance in the permitting process. Walton County will work with the FDEP and US Army Corps of Engineers in applying for the required “joint” permit through both agencies. The timeline for acquisition of these permits is generally 90 days from submission of the joint application.

E4. Is cost effective: *(Briefly describe why you think the project is cost effective. Discuss whether this project is more cost effective than alternative projects which would provide similar resource or service benefits.)*

The construction of an artificial reef takes advantage of naturally occurring environmental processes. Once the structure is secured to the sea floor, it attracts marine life that is searching for a place to settle, find refuge, serve as a nursery, and mature. In the absence of natural habitats, this self-sustaining structure will provide this foundation. The design of most reef systems allow for perpetual maintenance and repair if necessary that can extend the life of the reef system indefinitely, substantially reducing the overall cost of the project. Typically, artificial reefs require little or no operational expenditures and only minimal monitoring. This project will enhance Walton County’s marine environment and natural amenities, expand eco-tourism and the County’s tourist industry, and provide an intrinsic value to the community as a whole. See [Tab 4](#) for more economic information. The relatively low cost per module provides a very effective bang for buck project. Many reef modules can be used at a reasonable cost while providing a great deal of marine habitat.

E5. Has a high potential for long-term success as demonstrated by incorporating established/reliable methods and technologies: *(Briefly describe if/how critical methods and technologies that will be used to implement the project could be considered reliable or proven.)*

The proposed reef system provides a foundation for marine life to begin or perpetuate their natural life cycle. It has been well documented that limestone artificial reefs become inhabited by marine life in a relatively short period of time. The saltwater marine environment is extremely harsh and can experience extreme climatic phenomenon such as tropical storms and hurricanes. Several reef designs have demonstrated excellent resilience in the saltwater marine environment and provide an innovative anchoring system that prevents settling or movement. Semi-modular designs have demonstrated proficiency as wave attenuators. In the event of damage to the individual reef modules, replacements and repairs can be made to the modules without impact to the entire reef network. See [Tab 6](#) – Design and Materials.

E6. Is likely to provide benefits rapidly following implementation: *(Briefly describe the anticipated change in benefits anticipated over time.)*

Once construction of the reef system is complete, benefits begin to be realized immediately. The structures themselves, before inhabited by marine life, provide an attraction to divers and snorkelers. Past monitoring on newly deployed reef materials show that large schools of bait fishes and other small migrating fishes are attracted to the structure during the construction process and continue to be present once construction is complete. Other marine species begin to populate and propagate throughout the reef network within days of construction. Snorkeling reefs reach their full benefit almost immediately. Deeper, larger fishing reefs may reach their full benefit of attracting target species such as grouper, snapper, and amberjack within one to two years. The attached assessment by Bill Horn finds that the Walton Hopper Barge reef was satisfactory but not yet at full potential one year after deployment. See [Tab 7](#) – Biological Productivity.

E7. Has a high likelihood of public acceptance: *(Briefly describe evidence to support the given answer based on surveys or results and assessments from past projects. Known or likely opposition to a project should be recognized.)*

This project has a high likelihood of public acceptance. Walton County's economy is heavily dependent on tourism and water-related activities. There are limited reef systems currently accessible in Walton County by commercial and recreational fishermen alike. Past reef projects have been supported by the public, especially charter boat operators. This project would only provide positive outcomes for the Walton County economy and environment. Near shore accessible snorkeling reefs would add another dimension by providing kayakers and swimmers with a recreational opportunity otherwise limited to larger boats.

WE WANT YOUR INPUT!

Submit this form via email to Rebecca Wintering at Rebecca.Wintering@dep.state.fl.us . If you have any questions or concerns about the process for submitting a project, please contact Rebecca Wintering at:

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A current summary of projects is accessible through the Florida DEP's website at <http://www.dep.state.fl.us/deepwaterhorizon/projects.htm> (click on "View the list of restoration project ideas").